

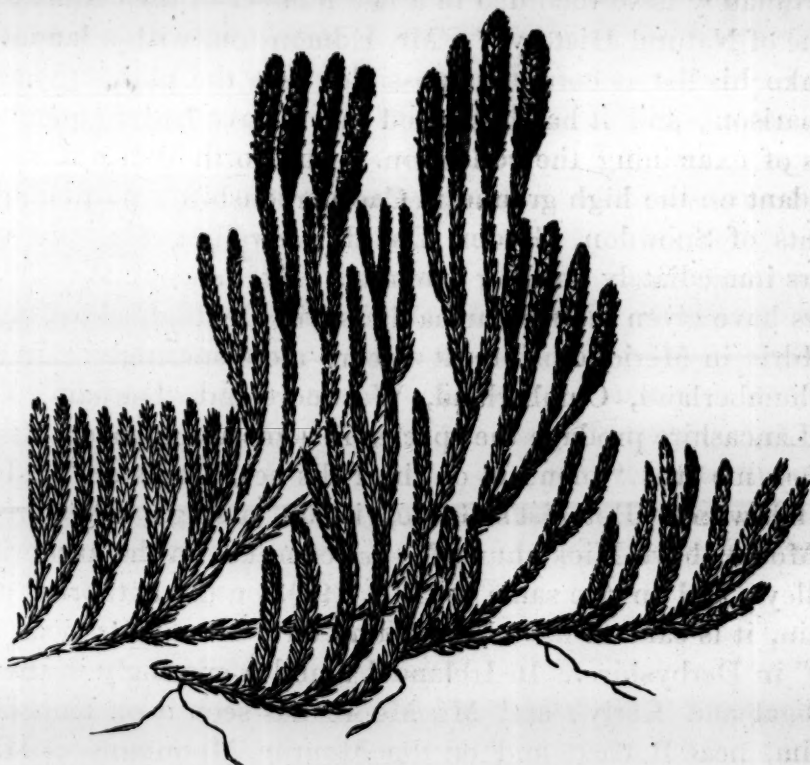
THE PHYTOLOGIST.

No. III.

AUGUST, MDCCCXLI.

PRICE 6D.

ART. XI.—*A History of the British Lycopodia, and allied Genera.*
By EDWARD NEWMAN. (Continued from page 20).



THE SAVIN-LEAVED CLUB-MOSS.

LYCOPodium ALPINUM of Authors.

LOCALITIES.

- England. Northumberland, on the Cheviots; Cumberland, Place Fell and Swarth Fell; Durham, Cronkley Fell and near Egleston; Lancashire, near the Holme about five miles from Burnley, and Coniston Fells; Cheshire, moors above Micklehurst; Derbyshire, mountains near the Derwent. *Turner and Dillwyn.*
- Wales. Denbighshire, moors, very common; *Turner and Dillwyn.* Caernarvonshire, very common. Merionethshire, on Cader Idris. Plinlymmon, *Mr. Lees.*
- Scotland. Very common on elevated districts.
- Ireland. Counties Donegal, Antrim, Down, Kerry.

THE Savin-leaved Club-moss, as its name of *alpinum* implies, is completely an alpine plant: it occurs in great abundance on the elevated tracts in Scotland, where I have myself seen it in localities too numerous to detail; and have received a long list of habitats from Drs. Greville and Balfour, Mr. Graham, &c. In several of the adjacent islands it is also found; and Mr. Edmonston has sent a specimen from Unst, the most northerly of the Shetlands; this specimen is ticketed "*Lycopodium clavatum*" (which species is not in the collection), and unfortunately is so recorded in a late number of the 'Annals and Magazine of Natural History.*' Mr. Edmonston, with a laudable desire to make his list as correct as possible, sent the plants themselves for comparison; and it has happened that I have had frequent opportunities of examining the collection. In North Wales it seems to be abundant on the high ground in Caernarvonshire; particularly on the ascents of Snowdon, Glyder, David, Llewellyn, &c., but it seldom occurs immediately on their summits. Mr. Janson, Mr. Kippist, and others have given me similar habitats: in Denbighshire, and on Cader Idris in Merionethshire, it occurs more sparingly. In England, Northumberland, Cumberland, Westmoreland, Durham, Yorkshire, and Lancashire produce the species in some abundance; Miss Beever informs me it is "plentiful on the Fells near Coniston." In Turner and Dillwyn's 'Botanist's Guide,' i. 193, a single Cheshire habitat,—"Moors above Micklehurst,"—is recorded on the authority of Mr. Bradley; and in the same work (i. 192), on the authority of Mr. J. Martin, it is said to have been found on "Mountains near the Derwent" in Derbyshire. In Ireland I found it sparingly in the counties Donegal and Kerry; and Mr. Moore has seen it on Knocklayd, Co. Antrim, near Belfast, and on the Mourne Mountains. Mr. Ball of Dublin writes me that he found it on Mangerton; and having spelled the name for the benefit of that nuisance to tourists, the self-styled Sir Peter Courtney, that worthy engraved it on a flat stone with the point of his knife, and doubtless displays his botanical lore for the edification of future tourists, and to the profound admiration and humiliation of his brother guides.

Our early botanists have so mixed up this with another continental species, *Lycopodium complanatum*, that it is impossible to decide to which their observations are to be referred. I have little doubt that Gerarde describes *alpinum*, although his figure evidently represents *complanatum*, and Tragus appears to be unacquainted with it altoge-

* In the same list *Lomaria spicant* appears as "*Polypodium vulgare*."

ther, his figure being likewise that of *complanatum*. Dillenius, as remarked by Sir J. E. Smith, was well acquainted with both species, but unaccountably misquotes Tragus, Gerarde, Dalechamp, and the two Bauhins, under his description of *L. alpinum*: owing to this confusion it is unsafe to quote any of the virtues, real or supposed, that have been assigned by these patriarchs of the science to either species.

We are informed by Sir W. J. Hooker that *Lyc. alpinum* is used by the inhabitants of Iceland as a dye for their woollen cloths. "A vast heap of *Lycopodium alpinum* lying before the priest's house drew my attention, and on enquiry I found that it was used for the purpose of giving their wadmal* a yellow dye, which is done by merely boiling the cloth in water, with a quantity of the *Lycopodium* and some leaves of *Vaccinium uliginosum*. The colour imparted by this process, to judge from some cloth shown me, was a pale and pleasant, though not a brilliant yellow." †

The savin-leaved club-moss is a pretty plant, in its foliage much resembling the savin from which it has derived its English name: it retains throughout the winter a much brighter green than either of its congeners: in summer the young shoots have a blue tint. According to Sir W. J. Hooker it is the badge of the clan Macrae.

The roots are tough, strong, wiry, and generally tortuous and branched; they occur at intervals varying from two to four inches, and are somewhat darker in colour than those of *Lyc. clavatum*; they fix the plant firmly to the soil.

The stem is procumbent, extending to a great length, and throwing up at short intervals clusters of branches, which, being twice or thrice dichotomously divided, give the plant a densely tufted appearance: the tips of the branches or divisions in each bunch or tuft are of nearly equal length, the extremities terminating on a level. When the plant is about to produce seed, spikes are thrown out from the extremities of these branches without any intermediate foot-stalk: the spikes are rather more than half an inch in length, and somewhat exceed the unfruitful branches in thickness, and are of a paler, yellower green colour than the rest of the plant: they are almost invariably in double pairs, plainly exhibiting the repeatedly dichotomous division of the branches which they terminate.

The entire plant is covered with elongate, harsh, indistinctly keeled, obtusely pointed leaves; the edges of the leaves are without perceptible teeth or serratures, and the points have no acute or filamentous

* Wadmal is the name of the woollen cloth usually worn by the Icelanders.

† 'Journal of a Tour in Iceland, in the year 1809,' i. 214.

termination: the leaves or bracts in the spike are membranous, flat, scale-like, serrated at the sides, dilated at the base, and terminating in a prolonged point at the apex. After the escape of the seeds the spikes bend downwards, assuming a semicircular form, and the bracts become reflexed.

The thecæ are sessile, of a pale yellow colour, and in form much resembling a kidney bean.

(To be continued).

ART. XII. — *Short Account of an Excursion to Cobham, Kent.*

By AL. IRVINE, Esq.

Albury, June 21, 1841.

SIR,

If you think the following short account of a visit to Cobham, Kent, worth your notice, you are welcome to insert it in 'The Phytologist,' to which I wish much success.

Yours very truly,

AL. IRVINE.

To the Editor of 'The Phytologist.'

ON Whitmonday, May 31, 1841, my friend Mr. Wm. Pamplin, jun. and myself left London Bridge in one of the steamers about 8 o'clock A. M., and arrived at Gravesend by half-past 10. We then started for Cobham across the fields, a walk which may be accomplished with ease in little more than an hour. Among the corn we found *Papaver hybridum*, *Adonis autumnalis*, *Ajuga Chamæpitys*, *Bupleurum rotundifolium*, &c.

After passing through the village of Cobham towards the park, beyond the carpenter's shop and yard, in a corner partly in the wood and partly on the little waste ground between the cornfield and the wood skirting the park, we gathered a species of *Tragopogon*,* which Mr. Pamplin, who showed me the spot, told me, as far as I can recollect, is an undescribed or unrecognised species.

From the spot where the *Tragopogon* grows we walked along the verge of the park, having the park on our left hand and the corn-fields on our right, and in a few minutes arrived at most magnificent plants of *Astragalus glycyphyllos*, growing in great abundance; we also ob-

* See next page.

served a few plants of *Lathyrus Nissolia*. Hence cutting across, that is, avoiding the windings of the park, and going over a rising part of the ground, we reached the field where *Althæa hirsuta* is this year in great profusion. This field extends quite up to the park, and is perhaps about half an hour's easy walk from Cobham. *Salvia pratensis* is found in the same spot, all along the bank on the extremity of the field, and close to the park. The ground rises as one walks towards Rochester, and that city is seen after passing along the head of this field and part of the next.

After collecting some specimens of *Althæa hirsuta* and *Salvia pratensis*, the latter plant being at that time most luxuriant and beautiful, we crossed the fields by a path which leads to the road between Cuxton and Halling, on the Medway. On the steep chalky downs or pastures about midway between these two villages, we found numerous and fine plants of columbine (*Aquilegia vulgaris*), the flowers of which were of a deep and exquisite blue; also specimens of *Orchis fusca* and various other Orchidaceous plants. My friend Mr. Pamplin had the pleasure of finding a curious variety of *Ophrys muscifera*. Between an ancient religious house and Cuxton, going towards the latter place on the right hand, and nearer to the said house than to the village of Cuxton, we gathered *Anchusa sempervirens* under the hedge; a plant very rarely found, but which has been occasionally noticed as belonging to this spot, since the times of the earliest botanists. Near the road between Gad's Hill and Gravesend, grow *Lathyrus latifolius* or *sylvestris* and *Fumaria parviflora*.

These places, together with the marshes about the Medway, will well repay the labour of investigation; especially to such as have a taste for the cultivation of local Botany.

[In a subsequent communication dated July 8th, Mr. Irvine kindly favours us with some remarks on the *Tragopogon* mentioned at p. 36, which Mr. Pamplin has observed in the same spot at Cobham for several years. Mr. Irvine also added from Koch's '*Flora Germanica*,' a description of *Tragopogon orientalis*, *Linn.*, with which species the Cobham plant agrees in the peduncles being cylindrical, and only slightly swollen immediately under the flowers, in the number of leaflets (8) of the involucre, and in the florets being much longer than the involucre. These, however, are almost the only particulars in which the Cobham plant agrees with *Trag. orientalis*; and having carefully examined fine and perfect specimens with which Mr. Pamplin has obligingly furnished us, we find them to agree so exactly with the description of *Trag. pratensis* in '*English Flora*,' iii. 388, even to the curling of the tips of the long and gradually tapering leaves, that we have little doubt of the Cobham plant being that species in a state of great luxuriance, and with the florets longer than usual, which Sir J. E. Smith says is sometimes the case. Our opinion is strengthened by finding that in the Cob-

ham plant the ligules are streaked with brown on the under side, and that the anthers are brown—characters which Linnæus, in contrasting *Trag. orientalis* and *pratensis* in his ‘Species Plantarum,’ expressly states that the former species does not possess; * moreover, the marginal achenia in our plant are muricated with tubercles, *not* with scales, as those of *Trag. orientalis* are stated to be by Koch.†

We may take this opportunity of mentioning our belief that the common plant of our meadows and pastures is *Tragopogon minor* of *Fries*, Nov. 2nd ed. 291, in which the involucre is about twice as long as the florets, and the peduncles much swollen immediately beneath the flowers; at least this is the plant we have generally met with. Ray’s remark that in *Tragopogon* the rays of the calyx are longer than the flowers,‡ would seem to favour this opinion: Relhan also observes that the corolla is sometimes shorter than the calyx.§ We should be glad to receive communications on this and other doubtful points connected with the history of British plants.—*Ed.*]

ART. XIII.—*Notice of Plants gathered in the vicinity of Aberystwith, Cardiganshire.* By EDWIN LEES, Esq., F.L.S., &c.

THE vicinity of Aberystwith is composed entirely of the clay slate formation, and consequently there is little variety of soil; but it may perhaps be more interesting to the collecting botanist, to class the plants met with according to the habitats affected by them, rather than to give them in one catalogue. They may be more easily sought too by this plan, and a long detail of the exact locality is hereby avoided.

LITTORAL PLANTS.

<i>Glaucium luteum</i>	<i>Erigeron</i> acre, on Borth sands
<i>Cochlearia officinalis</i>	<i>Convolvulus Soldanella</i>
<i>Cakile maritima</i>	<i>Plantago maritima</i> , a curious proliferous variety
<i>Silene maritima</i> , profusely	<i>Erythræa littoralis</i> and <i>pulchella</i>
<i>Sagina maritima</i>	<i>Salsola Kali</i>
<i>Arenaria peploides</i> and <i>marina</i>	<i>Centunculus minimus</i> , abundant on the sandy heath between Maen Ynws and Aberdovey Ferry, at Borth, six miles North of Aberystwith
<i>Erodium maritimum</i> , below the castle rock	<i>Polygonum maritimum</i>
<i>Rosa rubella</i> , very sparingly	<i>Euphorbia paralias</i>
<i>spinosissima</i> , plentifully	
<i>Eryngium maritimum</i>	
<i>Aster Tripolium</i> , at Borth, north of Aberystwith	
<i>Chrysanthemum maritimum</i>	

* *Trag. orientalis*.....differt a *T. pratensi* flore majore, calyce ubi reflectitur quasi fracto, radio corollæ subtus luteo, nec fusco striato, antheris luteis, nec fuscis. Sp. Pl. 1109.

† Floribus duplo majoribus, et acheniis squamoso muricatis ab antecedente (*T. pratensi*) satis differt. Koch, ‘Fl. German.’ 423.

‡ *Tragopogon* insigni nota a reliquis papposis lactescentibus differt, quod calycis floris radii ipsius folia seu petala longitudine excedant. ‘Synopsis,’ 171.

§ Corolla calyce quandoque brevior. ‘Fl. Cantab.’ 315.

BOG PLANTS.

Most of these grow on Cars Gochno, an extensive morass six miles north of Aberystwith, at the mouth of the little river Leary, and well deserving examination.

<i>Drosera longifolia</i>	<i>Anagallis tenella</i>
<i>Hypericum elodes</i>	<i>Pedicularis palustris</i>
<i>Comarum palustre</i>	<i>Scutellaria minor</i>
<i>Vaccinium Oxycoccus</i>	<i>Myrica Gale</i>
<i>Andromeda polifolia</i>	<i>Narthecium ossifragum</i>
<i>Campanula hederacea.</i> This little plant	<i>Rhynchospora alba</i>
beautifully adorns the bogs on Plinlimmon, by the course of the infant Severn.	<i>Eriophorum vaginatum</i>

ROCK PLANTS.

<i>Corydalis claviculata</i>	deed was gathered by Mr. Forster at this very spot; and perhaps <i>S. glaucum</i> itself may not be very different.
<i>Arabis hirsuta</i>	<i>Crithmum maritimum</i> , very sparingly
<i>Viola lutea</i> , on the hills about the Devil's Bridge	<i>Ligustrum vulgare</i> , on the castle rock; and I have generally found this plant on the maritime rocks of South Wales.
<i>Cotyledon Umbilicus</i>	<i>Linaria repens</i> , on the slate-rocks of Constitution-hill, very luxuriant and beautiful.
<i>Sedum anglicum</i> , very abundant on the castle rock	<i>Origanum vulgare</i>
<i>Sedum Forsterianum.</i> The plant which I gathered on a rock at the foot of the Rheidol Fall in 1837, and which flowered in a pot in my garden in June, 1839, differs considerably from the figure in 'Eng. Bot.' 1802, and comes nearer <i>S. glaucum</i> , 2477, the petals being narrow and almost linear, the calyx deeply cut, its segments sharp-pointed, and all the leaves with acute points. The barren branches are elongated, with the leaves curved or patent. Nevertheless, I conclude it can only be a variety of <i>S. Forsterianum</i> , which in-	<i>Cistopteris fragilis</i> , on the Devil's Bridge and neighbouring walls, plentiful.
	<i>Aspidium Oreopteris</i> , on the descent to Pont Bren
	<i>Hymenophyllum Wilsoni</i> , rocks at Pont Bren
	<i>Lycopodium clavatum</i> , alpinum and Sella-go, all very abundant on Plinlimmon, twelve miles N.E. of Aberystwith.

MARSH PLANTS.

<i>Spergula nodosa</i>	<i>Utricularia minor</i>
<i>Enanthe peucedanifolia</i>	<i>Callitriche autumnalis</i>
<i>crocata</i>	<i>Triglochin palustre</i>
<i>Lobelia Dortmanna</i> , Teivy Llyn, S.E. of Aberystwith	<i>maritimum</i>
<i>Samolus Valerandi</i>	<i>Juncus maritimus</i>

The above (*Lobelia* excepted) are found at Borth Marsh, six miles North of Aberystwith.

WOOD, MEADOW, AND ROAD-SIDE PLANTS.

*Hypericum dubium**Euonymus europæus**Lathyrus sylvestris**Rosa villosa**micrantha*

Rubus suberectus, abundant in the woods about the Devil's Bridge; and puzzling forms of this or *R. affinis*, occur in bushes in fields near the sea at Sarn Cynvelen, 2 miles N. of Aberystwith.

Spiræa salicifolia. On a wild common about midway between Aberystwith and

Cardigan, I observed a number of tall plants of this species, but it was very near a part recently enclosed, and therefore a half doubt arose whether they might not have been planted. But there was no garden or habitation near, and no soul about the desolate spot of whom to make the enquiry.

Sanguisorba officinalis, very fine on the ascent of the mountain to Llyn Teivy, near Strata Florida Abbey.

Antirrhinum Orontium

South Cottage, Malvern Wells,

July 17, 1841.

EDWIN LEES.

ART. XIV. — *Notes on Plants growing in the neighbourhood of Guildford, Surrey.* By J. S. MILL, Esq.

Impatiens fulva. At whatever period introduced, this plant is now so thoroughly naturalized, that it would be pedantry any longer to refuse it that place in the English Flora, which has been accorded on less strong grounds to many plants originally introduced from abroad. For many miles by the side of the Wey, both above and below Guildford, it is as abundant as the commonest river-side plants, the *Lythrum Salicaria* or *Epilobium hirsutum*; and my friend Mr. Henry Cole informs me that it is found in various places by the same river all the way to its junction with the Thames. It is equally abundant on the banks of the Tillingbourne, that beautiful tributary of the Wey; especially at Chilworth, where it grows in boundless profusion: and near Albury, where I saw it for the first time in 1822. The plant stated by Sir J. E. Smith to be growing near Guildford, under the name of *Impatiens Noli-me-tangere*, is doubtless no other than this plant. The *Noli-me-tangere*, which I have seen growing about Windermere, in the Pyrenees, and in Switzerland, is very distinct from this.

Geranium lucidum; in most of the lanes about Guildford.

Fumaria capreolata; near Losely, and by the roadside between Guildford and Merrow.

Fumaria parviflora; in corn-fields on the summit and southern declivity of the Hog's Back; and in lanes at its foot.

Valerianella dentata (or *Fedia dentata*); corn-fields on the chalk hills on both sides of Guildford, abundantly.

Isatis tinctoria; in great perfection in the chalk-pits close to the town, on the Shalford road; as noticed in 'The Phytologist,' p. 30.

Hippuris vulgaris; in one of the ponds in Clandon Park.

Bupleurum rotundifolium. This plant grew, last summer, in a corn-field on the brow of the hill by the path leading from Guildford to Martha's Chapel. The field having been sown this summer with a green crop, which was removed early, the plant cannot now be found.

Campanula hybrida; abundant in the lower part of the same field.

Corydalis claviculata. This plant formerly grew close to Martha's Chapel, but I have sought for it this year in vain.

Dipsacus pilosus; most abundant near Chilworth, especially in the hanging wood.

Androsæmum officinale; near Albury, but sparingly.

Saponaria officinalis; near Shere.

Stellaria glauca. This interesting and elegant plant grows in marshy meadows by the river Wey, near the foot of St. Catherine's Hill.

Menyanthes trifoliata; now (whatever may formerly have been the case) a rare plant in Surrey. It grows on Gomshall Common, in the vale of Albury; where I also once found a double variety of *Cardamine pratensis*.

Papaver hybridum; in corn-fields between Guildford and Martha's Chapel. *Papaver dubium* is as common in the neighbourhood as *P. Rhœas*.

Lepidium sativum; naturalized by the side of the Wey.

Nasturtium sylvestre and *Barbarea præcox*: not unfrequent by the side of the Wey.

Rhamnus catharticus and *Frangula*; the former not unfrequent on the downs, the latter abundant in a wood near Compton.

Orobanche major; at Martha's Chapel.

Listera Nidus-avis; in a heathy wood between Guildford and Martha's Chapel. With this exception I have not been able to find near Guildford any of the less common Orchideæ so numerous near Dorking.

Salvia verbenaca. St. Catherine's Hill; Merrow Church-yard; and various other places.

Cistopteris fragilis and *Asplenium Ruta-muraria*. These ferns grow in considerable abundance on a wall by the road-side at Albury, where I first found them in 1824, and again this summer.

Marchantia polymorpha; on the perpendicular face of the cutting on the road to Godalming, at the foot of St. Catherine's Hill. *Geranium lucidum* grows on an old wall on the opposite side of the road.

J. S. MILL.

ART. XV.—*Botanical Notes.* By GEORGE LUXFORD, A.L.S., F.B.S.E.

UNDER this title will occasionally be laid before the readers of 'The Phytologist,' any interesting particulars relating to British plants that may happen to fall under my observation, in the hope that such notices will, in doubtful cases, lead to further enquiry.

Silene inflata, Sm. A short time back while looking over the herbarium of Mr. Wm. Bennett, I found two specimens of a plant from the collection of one of his friends, ticketed "*Silene Otites*: Woolwich Marshes: June, 1836." These were specimens of a curious state of *Silene inflata*, somewhat similar to the female variety of that species stated by Linnæus to be frequent in the Upsal garden; but I have no recollection of having met with a record of the previous occurrence of anything similar to it in Britain. The stem and leaves of the Woolwich specimens are the same as those of the plant in its usual state; the panicle also is repeatedly dichotomous and spreading, but the flowers are crowded together into a compact head at the extremity of each of its branches. The flowers themselves have neither the inflated calyx nor the large white petals of the perfect plant, but in size and general appearance bear a strong resemblance to those of the fertile plant of *Silene Otites*. They consist of four or five membranaceous scales or bracteas, slightly streaked and reticulated with purple, and inclosing several follicular bodies, each of which terminates in a twisted, purple, style-like point. In one of the flowers which I examined there were ten of these bodies, the five central ones cohering and forming an ovarium with five styles, the outer five being free and detached. I could discover nothing resembling stamina.

I subjoin a description of the Upsal variety of *Silene inflata* (the *Cucubalus Behen* of Linnæus) from the 'Species Plantarum,' whereby the differences between that and our plant will at once be perceived. "A female variety is frequent in the Upsal garden. This is smaller than the perfect plant. The calyx is exactly ovate, not oblong-ovate, and more obscure: corolla smaller; stamina half the length of the corolla, terminating in a tubercle without anthers: styles 3—5, longer than the corolla, turned to one side: each plant is fertile." *

* *Cucubalus Behen*..... "Varietas Feminea in Horto upsaliense frequens. Hæc Hermaphrodito minor. Calyces exacte ovati, magis obscuri, nec oblongo-ovati. Corolla minor. Stamina corolla dimidio breviora terminata tuberculo absque antheris: Styli 3 s. 5, corolla longiores, declinati. Planta utraque fertilis."—'Sp. Pl.' 591.

The above description of the Woolwich plant is very imperfect; the specimens had apparently been dried by the application of heat and considerable pressure, so that immersion in boiling water did not restore them to a good state for examination. The present notice may however lead to the detection of this variety (or rather monstrosity) in other localities.

Monotropa Hypopitys. I have long wished that some able botanist would seriously set to work on this plant, in order to determine whether it be really a parasite or not. The question has been settled with regard to *Lathræa*; and there is no doubt that a series of observations conducted in the same candid spirit which characterises the investigations of Mr. Bowman, would in this case lead to equally satisfactory, though I suspect somewhat different results. From my earliest botanizing days I have felt much interested in the enquiry, and have neglected no opportunity of endeavouring to ascertain whether a connection does really exist between this plant and the roots of the trees among which it grows; but either from not being able to command the requisite time or necessary patience, my researches have hitherto led to nothing satisfactory. In the neighbourhood of Reigate the *Monotropa* grows under the beeches in the rather stiff clay capping the chalk hills. On taking up a tuft containing several individuals of *Monotropa* growing in a large lump of soil, I have generally found that however loose and friable the upper surface might be, the lower part was invariably hard and thoroughly permeated by the fibres of the beech-roots. It is almost impossible, in clearing away this part of the soil, to avoid breaking off the very brittle fibrous roots of the *Monotropa*; the fibres of the beech, being much tougher, may, with a little care, be extracted in considerable lengths. One would suppose, if the plant were really parasitical, that to these beech-fibres we should find attached at least some small portions of its roots; this I have not observed to be the case. Steeping the clay in water in order that it may be washed from the plants, appears rather to have the effect of rendering it harder: I once had a tuft in water for upwards of a week, but the steeping did no good.

I have generally found a number of young detached plants of *Monotropa* dispersed through the lump of earth: they vary in size from little, white, pea-like bodies to half an inch or upwards in height; and I should say are certainly not connected with the beech-roots. I am inclined to believe that a portion at least of the nourishment of this plant is derived from a layer of vegetable matter, consisting chiefly of the slowly decaying leaves of the beech, which are generally covered with a white byssoid fungus.

I shall be exceedingly glad to learn that some favourably situated botanist has been able to settle that long-debated point,---the parasitical or non-parasitical character of *Monotropa*.

GEO. LUXFORD.

ART. XVI.—*Notice of 'A History of British Forest Trees.'* By PRIDEAUX JOHN SELBY, F.R.S.E., F.L.S., Etc. London: John Van Voorst. Part 1. July, 1841.

THIS work is to appear in monthly numbers, and is printed uniformly with the series of British Quadrupeds, Fishes, Birds &c. The *first* number is now before us.

Although in announcing the *Phytologist* we have drawn no line between the botanical productions of Britain and the more showy plants of sunnier climes, yet we freely confess that we feel a strong bias in favour of everything indigenous; and the discovery of a moss or some rare flower in an unrecorded and unexpected habitat, gives us more pleasure than the importation of cargoes of the choicest exotics: the word "British" compensating abundantly for sobriety of colouring or humility of stature. Influenced by this feeling we take up Selby's '*British Forest Trees*' with the most perfect and entire good will, and it is with some feelings of compunction that we pen even a single line which may be taken for dispraise.

The number before us contains portraits of eight trees; the lime, the American lime, the sycamore, the Norway maple, the common maple, the horse-chesnut, the holly and the Robinia, commonly but erroneously called the acacia. Of these the maple and the holly are unquestionably British, the lime as cultivated and the sycamore have a doubtful claim, and the remaining four have no claim at all. This seems to us scarcely in accordance with the title. We do not complain that Mr. Selby has attempted any misrepresentation; on the contrary his work supplies abundant evidence of our assertion, that four only of the trees are reputed to be British. We submit therefore whether it would not be well to amend the title of the work by the introduction of the words "indigenous or introduced:" this would give the public a much better idea of the real object of Mr. Selby's undertaking.

The figures of the trees are beautifully cut, but have the demerit, if so it may be called, of being drawn from extraordinary specimens; thus, although we have no doubt that the figures are faithful portraits of certain trees that do exist, yet in exuberance of growth they so far

exceed their kith and kin, that we fail to recognise in them the forms of our old familiar friends. The detached figures of the leaf and florification are admirable: nothing can be better than the sprig of holly at p. 47; and the botanist will justly attach greater value to these details, than to the more showy effigies of the trees themselves.

The following specimens of the letter-press are from the descriptions of the sycamore and the common holly.

"Frequently as we hear the sycamore abused as not worth growing for the value of its timber, and devoid, as an ornamental tree, of beauty of outline and picturesque effect, we nevertheless agree with Sir T. Dick Lauder, that it is 'certainly a noble tree.' Vying in point of magnitude with the oak, the ash, and other trees of the first rank, it presents a grand unbroken mass of foliage, contrasting well, in appropriate situations, and when judiciously grouped, with trees of a lighter and more airy character, and affording, as Gilpin expresses it, 'an impenetrable shade.' Lauder well observes, 'The spring tints of the sycamore are rich, tender, glowing, and harmonious; in summer its deep green hue accords well with its grand and massive form, and the brown and dingy reds of its autumnal tints harmonise well with the mixed grove to which they give a fine depth of tone.' The colour of the bark is also agreeable to the eye, being of a fine ash grey, frequently broken into patches of different hues, by the peeling off, in old trees, of large flakes of the outer bark, in the manner of the plane."—p. 15.

"In natural woods, and especially in the deep glens and rocky denes of our northern districts, however beautiful and diversified the scenery may be, it never fails to receive an additional life and charm wherever the holly is present to intermingle its glossy foliage with the various tints around it. Oft have we stood and lingered in our walks to watch and admire the bright and fleeting lights produced by our favourite evergreen, as moved by the gentle zephyr, its polished leaves have reflected in diamond-like coruscations, the rays of light as they penetrated the recesses in which it grew, at the same time that its rich dark green foliage, by force of contrast, gave an additional value to the paler tints of the mountain ash, the hazel, and various other shrubs which grew around it."—p. 39.

ART. XVII.—*Varieties; Original and Select.*

11. *Value of Botanical Notes.* I am glad to see any fresh effort to extend botanical knowledge, and yours seems to be well calculated for this purpose. I hope that your solicitation for "the slightest piece of information" will be responded to, for these little affairs are sometimes productive of much pleasure and interest to succeeding botanists. I recollect an instance. A correspondent wrote to me for a specimen of *Aspidium fragile*, Swartz: I sought it in vain: but on turning to Withering I found mention of a station within two miles of my own house, where it had been found thirty years before by a lady who happened to have a temporary residence close to the spot. I went in search of it, and had the delight to find a single plant,—the only one I have ever discovered in the neighbourhood.—*Benjamin Maund; Bromsgrove, July 3, 1841.*

12. *Supposed effect of Chlorine on Blue Flowers.* As we are alluding to trifles, I will mention a circumstance which may lead to further enquiry. Near to the British

Alkali Works, in Worcestershire, I found a white variety of *Campanula patula*. This called my attention to the appearance of the species generally, and also to *Campanula rotundifolia*, both being abundant in the neighbourhood. I observed that the flowers of each species were in every instance much paler than I had been used to see them, and I have not the least doubt that the chlorine, which was then thrown off in great abundance from the alkali works, produced this effect. I am not supposing that the flowers, on expansion, were really bleached by a vitiated atmosphere; but I believe that the chlorine had an influence on the juices of the plants, and prevented the development of the usual colour of their flowers.—*Id.*

13. *Polypodium Dryopteris* and *Allosorus crispus* grow among rocky debris [on the Malvern Hills], a locality not mentioned in Mr. Newman's beautiful work on British Ferns, and thus proving that the geographical distribution of species can hardly be satisfactorily determined without the extensive aid of local botanists.—*Edwin Lees; South Cottage, Malvern Wells, July 12, 1841.*

14. *Asplenium viride*. While on the subject of ferns I will just mention a curious locality for the green spleenwort (*Asplenium viride*), proving at the same time the tenacity of existence exhibited by these mural insinulators. About fourteen years ago some plants gathered by the late Mr. T. B. Stretch, of Worcester, fell into my hands, and among them was a specimen of *Asplenium viride*, ticketed "Ham Bridge, Worcestershire." This is an old stone bridge over the river Teme, near Clifton, between Tenbury and Knightsford Bridge. Thinking this a curious habitat for this mountain fern, I took an early opportunity of examining the bridge, and did so for two or three successive years; but my search was vain, for the bridge had been recently repaired and whitewashed (*horribile dictu!*), and no trace of any fern or even plant could I find upon it. However, in 1836, happening to go that way again, I once more paused and leaned over the parapet of the bridge—scarcely believing my eyes, two specimens of the *Asplenium* were positively there and well fruited. One I gathered, and left the other as an "egg in the nest." That the fern had been almost obliterated, and its roots completely obscured and hindered from vegetating for some years by the villainous whitewash, appears I think very evident; but this fact seems to suggest that where a fern has once established itself, it may probably be again found after the lapse of years, though at intermediate times of examination apparently extinct.—*Id.*

15. *Dispersion of Seeds*. The modes by which the seeds of plants are transported about, are exceedingly various and well worthy of attention: and perhaps none are more so than those of Syngenesious plants, most of which have a downy egret, as the dandelion, thistle, groundsel, &c. I do not know a prettier sight than a dandelion-seed floating along beneath its feathery plume, on a gentle breeze: now erect, now lightly waving to one or the other side, yet still keeping its position, like the car of a miniature balloon; till at length it slowly descends, and fixes itself in some crevice of the earth, there to be nourished, far enough from its parent flower. Some seeds have attached to them a broad, thin blade (*samara*), as the ash, maple, &c., which forces them obliquely through the air, instead of perpendicularly: others are jerked to a distance by a peculiar mechanism in the seed-vessel: others are carried to distances in the stomachs of birds, their vegetative power increased, rather than destroyed, by the process of digestion. All show a power at work, to which the wisdom of man is foolishness. * * One of the most curious of our forest seeds is that of the bass-wood, [*Tilia americana*, Linn.] You may see one yonder slowly descending through the air: it whirls round horizontally with great rapidity, as it falls, as if on an axis or pivot.

Take it up and examine it; here is a long, ovate-lanceolate leaf (*bractea*), transversely bent in the middle: from the angle on the under side proceeds a slender stalk, at the end of which is fixed a round body like a pea, which looks, as it descends, as if it hung by a thread from the leaf-like wing: this contains the seed.—Gosse's '*Canadian Naturalist*.'

16. *Splitting of trees by the freezing of water.* Old trees, when cut down, are often found to have the heart-wood so separated from the sap-wood, as to fall apart when a log is split through the centre; and we find that the crevice or intermediate space has been occupied by a film of ice. This explains those loud reports which we heard just now, and which so often occur in the forest in frosty weather. Some water has lodged in the tree — perhaps in some maggot's or woodpecker's hole — which freezing, rends the wood by its irresistible force of expansion; into the rent so formed, the water percolates as soon as a thaw comes, and freezing again, extends the crevice downwards, each rent attended with these sudden and startling sounds.—*Id.*

17. *Arrow-poison plant.* Our path was over "hill and dale," mostly in a N.N.W. and N.W. direction. It became every moment wilder: we had to cross several mountain-streams, which flowed in deep beds, precipitating at their banks a ferruginous matter; underbush became scarce; it appeared as if Nature here delighted only in gigantic forms. Our Indians thought they had mistaken the track; but as we arrived at a stream which ran rapidly over the sloping ground, exhibiting granitic shelves, we observed that several paths united; and crossing the brook our guides stopped, and pointing to a ligneous twiner which wound itself snake-like from tree to tree, they called out "Urari," the name of the plant in the tongue of our guides. My wish was thus realized; and that plant which Baron de Humboldt was prevented from seeing, and which was one of the chief objects of Mr. Waterton's '*Wanderings*,' but without success, I now saw before me.—Schomburgk in '*Ann. and Mag. Nat. Hist.*' July, 1841.

18. *Preparation of the Indian arrow-poison.* It is only the bark of the woody parts and its alburnum which are considered to possess the poisonous principle in the highest degree. The stem of the plant is therefore cut into pieces about three feet in length, off which the bark is stripped, and after having been pounded it is steeped in water, for which purpose a new earthen vessel is used; here they allow it to remain for some time well covered, until the water is of a yellowish colour, when it is filtered through a funnel-shaped matappa lined with plantain-leaves. Several other plants have been meanwhile procured, and after their juice has been extracted in a similar manner, this extract is kept ready to be added to the former, at the moment it has been concentrated on a slow fire to the consistency of a syrup. The addition of that juice gives a darker colour to the Urari, which, from the time of its becoming concentrated, has the appearance of tar: it is now put into small calabashes, which are covered with leaves to prevent the poison from coming in immediate contact with the air. * * This is the unadorned account of the preparation of the Urari, and the method which is followed by the Macusis at and about Pirara, and the Wapisianas of the Canuku mountains where the plant grows. There appears to be no danger whatever in the preparation, and the vapours which are disengaged are entirely innocent; but the circumstance that it requires several days to watch the pot closely on the fire and to take off the scum &c., before it is properly concentrated, as well as the superstitious customs with which the poison-maker, for his own advantage, surrounds the preparation of it, prevent the Indian, with his natural indolence, from making it more than once or twice a year. *Id.*

18. *Effects of the poison.* As much as I had heard of this fatal poison, I nevertheless cannot abstain from noting the astonishment by which I was seized when I saw

it used for the first time. We travelled over the savannahs girt by the Pacaraima mountains; a deer was discovered browsing in the high grass before us. Lieutenant Haining, of the 65th regiment, my faithful travelling companion, was too far behind with his gun for us to await his coming up, and one of the Macusi Indians took a poisoned spike from his sarima and fixed it to his arrow. Cautiously he stole upon the unsuspecting deer, and shot the arrow into its neck; it made a jump in the air, fled with the speed of the wind over the savannahs, but it had scarcely run forty yards when it fell panting to the ground, and expired. * * I have seen the tapir, while swimming across the Rupununi, so slightly wounded that the spike had just penetrated through the thick skin; nevertheless it took effect, and the animal expired. Numerous are the birds of larger and smaller size which I have seen thus secured.—*Id.*

[The plant from the juices of which the Macusi and Wapisiana Indians prepare their fatal arrow-poison, is the *Strychnos toxifera*, Schomb., 'Hook. Ic. Pl.' t. 364 and 365: discovered by M. Schomburgk, in 1835. It is a native of South America, and appears only to have been found in the granitic mountains of Canuka or Conocon, in lat. 3° 10' N.—*Ed.*]

20. *New Botanical Work.* Miss Roberts, the well-known authoress of many popular works connected with Natural History, is preparing for publication 'The Dial of Flowers. We anticipate much pleasure from perusing it.—*Ed.*

ART. XVIII.—*Proceedings of Societies.*

ROYAL ASIATIC SOCIETY.

June 19.—The secretary read a botanical description of the *Lodoicea Sechellarum*, by M. Bernard. This production, which has long been known under the appellation of the double sea-cocoa-nut, grows only on two small islands of the Sechelles group, nearly under the equator. Many centuries before the place of its growth was known, portions of this nut had been frequently carried by the oceanic currents to the Maldivé islands, &c.; and the most absurd fables were current respecting its origin and virtues. It was generally supposed to grow at the bottom of the sea; and the votaries of Vishnu devoutly believed that when that deity was churning the ocean, he broke off several of the branches from the tree, that they might float upon the surface, and be a specific for all the ills that afflict mankind. The *Lodoicea* attains a height of 80 or 90 feet, and is surmounted by a beautiful crown of winged and palmated leaves. The leaves open like a fan; they are of large size, often attaining a length of 20 feet with a breadth of 10 or 12. The fruit is generally double, sometimes triple and even quadruple, and with its enclosing drupe attains a length of 13 inches with a circumference of 3 feet; and sometimes weighs from 40 to 50 lbs. A remarkable circumstance connected with this tree, is the length of time necessary to mature its fruit, and the long duration of its bloom. It bears flowers and fruits of all ages at one time. It is to be regretted that this tree is not cultivated, and that a practice has prevailed of cutting it down in order to get at the fruit and tender leaves. The writer of the notice, in fact, expresses his fears that the species will be ere long entirely lost.

The uses of the double sea-cocoa-palm are numerous. When young the fruit is a refreshing article of food: when ripe it furnishes oil. Its germ, when developed, is a sweet dish. The hard shell is formed into vessels for carrying water, &c.; and the whole nut is used in India as a medicine. The wood is used for building purposes &c.: its leaves for thatching, and when platted they are made into hats, baskets, fans, and a number of tasteful works for which the ladies of the Sechelles are celebrated.—*Athenæum*, July 8, 1841.

BOTANICAL SOCIETY OF LONDON.

July 8th.—William White, Esq. in the Chair. The Rev. C. A. Johns, F.L.S., exhibited specimens of a remarkable variety of *Scolopendrium vulgare*, discovered on a garden wall at Merrefield, near Saltrum, Devon. About an inch above the root the rachis forks so as to bear two perfect fronds, the summits of which are repeatedly divided into ligulate obtuse segments; the whole plant not exceeding four inches in length.

Mr. J. also exhibited a probably new species of *Sphagnum*, discovered in May, 1841, at Hoe Lake, Tren-tishoe, Devon, floating in a pool formed by a mountain stream. The leaves, which are a quarter of an inch long, are elliptic-lanceolate, acute, and reticulated very differently from those of any other British species. Mr. Brewer exhibited living specimens of *Iris fatidissima*, *Epipactis palustris*, and other interesting plants from Reigate, Surrey. Dr. John Lhotsky read a paper "On Phytogenesis, or the Origin of Plants."—*G.E.D.*